

MPEP 2106 is directed to patent subject matter eligibility. As noted therein, there are four categories of invention deemed to be appropriate subject matter of patent. These categories include processes. Independent claim 1 is directed to a process, namely, a method of providing electrical system monitoring and diagnosis. The so-called judicial exceptions to patentability relate to abstract ideas, laws of nature and natural phenomena. The action does not identify if claim 1 is being categorized as an abstract idea, a law of nature or natural phenomena. Clearly, claim 1 does not specify subject matter which can be categorized as any of abstract idea, law of nature or natural phenomena. The requirement for physical transformation and/or a useful, concrete and tangible result, applies only to subject matter which is an abstract idea, law or nature or natural phenomena. Because the claimed invention does not fit with any of these types of subject matter, the discussion that there must be a physical transformation and/or useful, concrete and tangible result is inapplicable.

More particularly, a method of providing electrical system monitoring and diagnosis using a motor controller and an external monitoring and diagnostic device communicating with one another to periodically transfer parameters of measured electrical power system characteristics from a control circuit to the external monitoring and diagnostic device to monitor electrical power system characteristics in real time, as specified in claim 1, is not an abstract idea, is not a law of nature, and is not natural phenomena.

Claims 1-10 are clearly directed to statutory subject matter.

Moreover, with respect to the remaining discussion in the rejection, the described steps of providing a motor controller and diagnostic device, and establishing communications and transferring parameters to monitor electrical power system characteristics in real time produces a useful, concrete and tangible result. Thus, even if the claim could be characterized as an abstract idea, law of nature, or natural phenomena, which it is not, the claimed invention would still define statutory subject matter. Applicants do not understand the comment that the invention has not been used in a disclosed practical application nor made available in a manner that its usefulness can be realized. It's usefulness is apparent from the plain reading of the claim, the ability to monitor electrical power system characteristics in real time.

For the above reasons, claims 1-10 are allowable and withdrawal of the rejection is requested.

Applicants traverse the rejection of claims 1-8, 10-18 and 20-27 as anticipated by Bearden et al. U.S. Patent No. 6,167,965 ("Bearden").

This rejection is a verbatim copy of the prior art rejection in the September 13, 2006, Office action. Arguments against this rejection were presented in the Request for Reconsideration filed on January 12, 2007, by applicants. The current Office action does not respond to any of applicant's arguments. Instead, the action includes a statement that the arguments were considered "but are moot in view of the new ground(s) of rejection". The Section 102 rejection is not a new ground of rejection. Thus, the arguments are not moot.

Independent claim 1 specifies a method of providing electrical system monitoring and diagnosis, comprising: providing a motor controller including solid state switches for controlling application of power to the motor, and a control circuit for controlling operation of the solid state switches and for measuring electrical power system characteristics relating to operation of the solid state switches; providing an external monitoring and diagnostic device; establishing communications between the control circuit and the external monitoring and diagnostic device; and periodically transferring parameters of the measured electrical power system characteristics from the control circuit to the external monitoring and diagnostic device to monitor electrical power system characteristics in real time.

An anticipation can be established only by a single prior art reference disclosing each and every element of the claim, arranged as in the claim. Bearden does not satisfy this requirement and thus does not anticipate independent claim 1.

Particularly, Bearden does not disclose a motor controller including a control circuit measuring electrical power system characteristics related to operation of solid state switches nor does it disclose periodically transferring parameters of measured electrical power system characteristics from the control circuit to an external monitoring and diagnostic device to monitor electrical power system characteristics in real time.

The action attempts to cross reference each limitation of claim 1 to the teachings of Bearden. Bearden is related to a submersible pump which is operated in accordance with a motor controller and also does provide a monitoring function. However, the monitoring function does not

monitor electrical power characteristics related to operation of solid state switches in a motor controller. With respect to the claim limitation of measuring electrical power system characteristics relating to operation of the solid state switches, the action references col. 10, lines 46-55 of Bearden. The referenced passage does not discuss measuring electrical power system characteristics relating to operation of solid state switches. With respect to the step of periodically transferring parameters of the measured electrical power system characteristics from the control circuit to the external monitoring and diagnostic device to monitor electrical power system characteristics in real time, the action references col. 41, lines 9-22 of Bearden. The referenced passage relates generally to the transfer of data. It does not disclose or suggest the type of data being transferred. As such, Bearden does not teach what is stated in the action.

More particularly, the nature of the monitoring in Bearden is discussed at col. 11, lines 15-62. The types of conditions that are monitored relate to sensed operating conditions for components of the pump, or parameters relating to motor operation. There is no discussion regarding measuring electrical power system characteristics relating to operation of the solid state switches. The specific type of information that is monitored is described in Figs. 2D, 2E, 2F, 2G, 2J, 2K, 2M, 2O, 2P, 2Q, 2V, 2X, 2W, 2Z, 2AA, 2BB, 2CC, 2DD. None of the information comprises electrical power system characteristics relating to operation of solid state switches.

Because Bearden does not disclose each and every element of claim, arranged as in the claim, there is no anticipation. Moreover, because Bearden is directed to monitoring other

factors related to pump operation, and does not suggest monitoring electrical power system characteristics, any obviousness rejection would also be improper.

Claims 2-8 and 10 depend from claim 1 and are believed allowable for the same reasons therefor.

Independent claim 11 specifies a motor controller system including a motor controller having a control circuit measuring electrical power system characteristics related to operation of the solid state switches. Means are operatively associated with the control circuit and an external monitoring and diagnostic device for transferring parameters of the measured electrical power system characteristics from the control circuit to the external monitoring and diagnostic device to monitor electrical power system characteristics in real time.

Claim 11 and its dependent claims 12-18 and 20 are not anticipated or obvious over Bearden for the same reasons discussed above.

Independent claim 21 is directed to a soft starter system including a motor controller having a control circuit measuring electrical power system characteristics relating to operation of solid state switches and an external monitoring and diagnostic device including a program for transferring parameters of the measured electrical power system characteristics from the control circuit to the external monitoring and diagnostic device to monitor electrical power system characteristics in real time. Claim 21 and its dependent claims 22-27 are not anticipated or obvious over Bearden for the same reasons discussed above.

For the above reasons, claims 1-8, 10-18, and 20-27 are believed allowable and withdrawal of the rejection is requested.

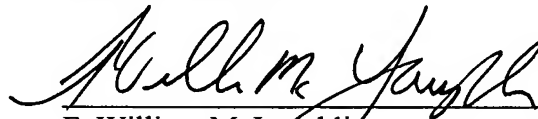
Applicants traverse the rejection of claims 9 and 19 as obvious over Bearden in view of Jonsson et al. U.S. Patent No. 6,984,950.

Claims 9 and 19 depend from claims 1 and 11 and relate to use of an infrared communication path. The deficiencies with respect to Bearden are discussed above. Jonsson does not disclose or suggest the deficiencies. Instead, Jonsson is cited for use of an infrared communication path. Even if the combination is proper, the combination would not result in the claimed invention for the reasons discussed above. Therefore, claims 9 and 19 are believed allowable and withdrawal of the rejection is requested.

Summarizing, the principal reference, Bearden, describes monitoring operating characteristics of an electrical submersible pump. It does not describe monitoring electrical power system characteristics relating to operation of solid state switches.

Reconsideration of the application and allowance and passage to issue are requested.

Respectfully submitted,

  
F. William McLaughlin  
Reg. No. 32,273

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WOOD, PHILLIPS, KATZ,  
CLARK AND MORTIMER  
Citigroup Center, Suite 3800  
500 W. Madison Street  
Chicago, IL 60661  
(312) 876-1800